Approved for use through 10/31/2002. OMB 0651-0031 U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

## **INFORMATION DISCLOSURE** STATEMENT BY APPLICANT

Complete if Known **Application Number** 10/646,472 August 21, 2003 Filing Date First Named Inventor Jamie Wakeam et al. **Group Art Unit** 2661 Examiner Name **TBA** 

(use as many sheets as necessary)

**Sheet** of 003797.00618 Attorney Docket Number

|                          | OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS   |  |
|--------------------------|---|--|
| Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T²   |
|                          | H. Kitakami et al., "A Constraint Solver for Reconciling Heterogeneous Trees," IC-AI '00 International Conference, 2000, pp. 1419-1425  |  |
|                          | M. van Veller et al., "Methods in Vicariance Biogeography: Assessment of the Implementations of Assumptions 0, 1, and 2," Cladistics 16, 2000, pp. 319-345  |  |
|                          | V. V'yugin et al., "Tree Reconciliation: Reconstruction of Species Phylogeny by Phylogenetic Gene Trees," Molecular Biology, Vol. 36, No. 5, 2002, pp.650-658   |  |
|                          | H. Prodinger, "A q-Analog of the Path Length of Binary Search Trees," 10/14/1999, pp. 1-9   |  |
|                          | R. Page, "Extracting Species Trees From Complex Gene Trees: Reconciled Trees And Vertebrate Phylogeny," Molecular Phylogenetics and Evolution, Vol. 14, No. 1, 2000, pp. 89-106   |  |
|                          | M. van Veller et al., "A posteriori and a priori methodologies for testing hypotheses of causal processes in vicariance biogeography," Willi Hennig Society, 2001, pp. 26   |  |
|                          | A. Martin, "Choosing among Alternative Trees of Multigene Families," Molecular Phylogenetics and Evolution, Vol. 16, No. 3, 2000, pp. 430-439   |  |
|                          | M.T. Hallett et al., "Efficient Algorithms for Lateral Gene Transfer Problems," RECOMB, 2001, pp. 149-156   |  |
|                          | R. Neininger, "On binary search tree recursions with monomials as toll functions," Journal of Computational and Applied Mathematics, 2002, pp. 185-196  |  |
|                          | M. Hofri et al., "Efficient Reorganization of Binary Search Trees," Proceedings of the 2 <sup>nd</sup> Italian Conference on Algorithms and Complexity, 1994, pp. 1-25  |  |
|                          | M. Hallett et al., "New Algorithms for the Duplication-Loss Model," RECOMB, 2000, pp. 138-146   |  |
| -                        | B. Ma et al., "From Gene Trees to Species Trees," Second Annual International Conference on Computational Molecular Biology," 1998, pp. 1-29  |  |
|                          | Miklós Csűrös, "Fast recovery of evolutionary trees with thousands of nodes,"  Department of Computer Science, Yale University, 2002, 36 pages  |  |
|                          | Hajime Kitakami et al., "Constraint Satisfaction for Reconciling Heterogeneous Tree Databases," DEXA 2000, LNCS 1873, pp. 624-633   |  |
|                          | Cite<br>No.1  | Include name of the author (In CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.  H. Kitakami et al., "A Constraint Solver for Reconcilling Heterogeneous Trees," IC-AI '00 International Conference, 2000, pp. 1419-1425  M. van Veller et al., "Methods in Vicariance Biogeography: Assessment of the Implementations of Assumptions 0, 1, and 2," Cladistics 16, 2000, pp. 319-345  V. V'yugin et al., "Tree Reconciliation: Reconstruction of Species Phylogeny by Phylogenetic Gene Trees," Molecular Biology, Vol. 36, No. 5, 2002, pp.650-658  H. Prodinger, "A q-Analog of the Path Length of Binary Search Trees," 10/14/1999, pp. 1-9  R. Page, "Extracting Species Trees From Complex Gene Trees: Reconciled Trees And Vertebrate Phylogeny," Molecular Phylogenetics and Evolution, Vol. 14, No. 1, 2000, pp. 89-106  M. van Veller et al., "A posteriori and a priori methodologies for testing hypotheses of causal processes in vicariance biogeography," Willi Hennig Society, 2001, pp. 26  A. Martin, "Choosing among Alternative Trees of Multigene Families," Molecular Phylogenetics and Evolution, Vol. 16, No. 3, 2000, pp. 430-439  M.T. Hallett et al., "Efficient Algorithms for Lateral Gene Transfer Problems," RECOMB, 2001, pp. 149-156  R. Neininger, "On binary search tree recursions with monomials as toll functions," Journal of Computational and Applied Mathematics, 2002, pp. 185-196  M. Hofri et al., "Efficient Reorganization of Binary Search Trees," Proceedings of the 2 <sup>nd</sup> Italian Conference on Algorithms for the Duplication-Loss Model," RECOMB, 2000, pp. 138-146  B. Ma et al., "From Gene Trees to Species Trees," Second Annual International Conference on Computational Molecular Biology," 1998, pp. 1-29  Miklós Csūrōs, "Fast recovery of evolutionary trees with thousands of nodes," Department of Computer Science, Yale University, 2002, 36 pages  Hajime Kitakami et al., " |

| Examiner<br>Signature | Chelin L. Dan | Date<br>Considered | 02/09/20te |  |
|-----------------------|---------------|--------------------|------------|--|
|                       |               |                    |            |  |

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Iniciade copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

<sup>1</sup> Unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08A (10-01)
Approved for use through 10/31/2002. OMB 0851-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known **Application Number** 10/646,472 August 21, 2003 Filing Date First Named Inventor Jamie Wakeam et al. Group Art Unit 2661 **Examiner Name TBA** 

(use as many sheets as necessary)

003797.00618 of Attorney Docket Number

| U.S. PATENT DOCUMENTS |      |  |                  |                                  |                                       |
|-----------------------|------|--|------------------|----------------------------------|---------------------------------------|
| Examiner Cite         |      | Document Number                            | Publication Date | Name of Patentee or Applicant of | Pages, Columns, Lines, Where Relevant |
| Initials *            | No.1 | Number - Kind Code <sup>2</sup> (if known) | MM-DD-YYYY       | Cited Document                   | Passages or Relevant Figures Appear   |
| CLD                   |      | 6,603,881 B2                               | 08-05-2003       | Perrone et al.                   |                                       |
| CHO                   |      | 6,442,555 B1                               | 08-27-2002       | Shmueli et al.                   |                                       |
|                       |      |  |                  |                                  |                                       |
|                       |      |  |                  |                                  |                                       |
|                       |      |  |                  |                                  |                                       |
|                       |      |  |                  |                                  |                                       |
|                       |      |  |                  |                                  |                                       |
|                       |      |  |                  |                                  |                                       |
|                       |      |  |                  |                                  |                                       |

|           | FOREIGN PATENT DOCUMENTS |   |                    |                             |  |    |
|-----------|--------------------------|---|--------------------|-----------------------------|--|----|
| Examiner  | Cite                     | Foreign Patent Document   | Publication        | Name of Patentee or         | Pages, Cotumns, Lines,<br>Where Relevant |    |
| Initials* | No.1                     | Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known) | Date<br>MM-DD-YYYY | Applicant of Cited Document | Passages or Relevant<br>Figures Appear   | ۳٥ |
|           |                          |   |                    |                             |  |    |
|           |                          |   |                    |                             |  |    |
|           | •                        |   |                    |                             |  |    |

| Examiner Initials * | Cite<br>No.1 | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|---------------------|--------------|---|----------------|
| CLD                 |              | Ramachandran et al., "An Architecture for Ink Annotations on Web Documents," August 2003, vol. 1, pages 256-260   |                |

| Examiner<br>Signature | Cheloi L. Day | Date<br>Considered | 02/09/2004 |
|-----------------------|---------------|--------------------|------------|
|-----------------------|---------------|--------------------|------------|

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

<sup>1</sup> Unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

| Under               | he Paperwork Reduction Act of 1995, no j | A,<br>U.S. Palent and Trac<br>essons are required to respond to a collection | PTO/S8/08A (10-01) pproved for use through 10/31/2002. OMB 0851-0031 femark Office: U.S. DEPARTMENT OF COMMERCE = of Information unless it contains a valid OMB control number, |
|---------------------|--|--|---|
| Substitute for form |  |  | Complete If Known   |
| INFORMA             | INFORMATION DISCLOSURE                   |  | 10/848,472  |
|                     | STATEMENT BY APPLICANT                   |  | August 21, 2003   |
|                     |  | First Named Inventor   | Jamie Wakeam et al.   |
| •                   |  | Group Art Unit   | 2661  |
| (use es             | many sheets as necessary)                | Examinar Name  | TBA   |
| Sheet               | of                                       | Attorney Docket Number   | 003797.00818  |

| U.S. PATENT DOCUMENTS |             |  |                  |                                  |                                       |
|-----------------------|-------------|--|------------------|----------------------------------|---------------------------------------|
| Examiner Cite         |             | Document Number                            | Publication Date | Name of Patentee or Applicant of | Pages, Columns, Lines, Where Relevant |
| Inidula "             | Cite<br>No. | Number - Kind Code <sup>2</sup> (II known) | MM-DD-YYYY       | Gited Document                   | Passages or Retevant Figures Appear   |
| CZB                   |             | 2002/0085002 A1                            | 07-04-2002       | Lamping et al.                   |                                       |
| CHO                   |             | 2002/0191452 A1                            | 12-19-2002       | Fujihara                         |                                       |
| rais                  |             | 6,377,259 B2                               | 04-23-2002       | Tenev et al.                     |                                       |
|                       |             |  |                  |                                  |                                       |
|                       |             |  |                  |                                  |                                       |
|                       |             |  |                  |                                  |                                       |
| 1                     |             |  |                  |                                  |                                       |

| FOREIGN PATENT DOCUMENTS |              |  |                             |                                |  |    |
|--------------------------|--------------|--|-----------------------------|--------------------------------|--|----|
| Descions                 | <b>6</b> 74  | Foreign Patent Document  | 749                         | Name of Palentee or            | Pages, Columns, Lines,                             |    |
| Examiner<br>Initials*    | Cite<br>No.1 | Country Code <sup>3</sup> • Number <sup>4</sup> • Kind Code <sup>3</sup> ( <i>if known</i> ) | Publication Date MM-DD-YYYY | Applicant of Cited<br>Document | Where Relevant Passages or Relevant Figures Appear | 70 |
|                          |              |  |                             |                                |  |    |
|                          |              |  |                             |                                |  |    |
|                          |              |  |                             |                                |  |    |

| OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS |              |   |    |  |
|---|--------------|---|----|--|
| Examiner<br>Initials *                            | Cite<br>No.1 | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T² |  |
|   |              |   |    |  |
|   |              |   |    |  |

| Examiner<br>Signature | Chelcie S. Dage  | Date<br>Considered | 02/09/2006 |
|-----------------------|--|--------------------|------------|
| Cold Lord D           | The state of the s | Consideren         |            |

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered, include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case, Any comments on the amount of time you are required to complete this form should be sent to the Chief information Officer. U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

<sup>1</sup> Unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is ettached.

of

Sheet

PTO/SB/08A (10-01)

003797.00618

Approved for use through 10/31/2002 OMB 0851-0031 U.S. Palent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Substitute for form 1448A/PTO Complete if Known INFORMATION DISCLOSURE Application Number 10/646,472 STATEMENT BY APPLICANT Filing Date August 21, 2003 First Named Inventor Jamie Wakeam et al. **Group Art Unit** 2661 (use as many sheets as necessary) Examiner Name TBA

Attorney Docket Number

| Examinar   | Clan | Dooument Number                             | Publication Date Cited Document | Name of Patentee or Applicant of | Peges, Columns, Lines, Where Relevan   |
|------------|------|---|---------------------------------|----------------------------------|--|
| Intitels * | No.  | Number - Kind Code <sup>3</sup> (if langwn) |                                 | Cited Document                   | Passages or Relevant<br>Figures Appear |
| CU3        |      | 5,559.897                                   | 09-24-1996                      | Brown et al.                     |  |
|            |      | 5,911,013                                   | 08-08-1999                      | Taniishi                         |  |
| CLB        | L    | 5,394,484                                   | 02-28-1995                      | Casey et al.                     |  |
|            |      |   |                                 |                                  |  |
|            |      |   |                                 |                                  |  |
|            |      |   |                                 |                                  |  |
|            |      |   |                                 |                                  |  |

|                       |              | FOREIGN PA   | ATENT DOCU                  | MENTS   |  |    |
|-----------------------|--------------|--|-----------------------------|---|--|----|
| Examiner<br>Initials* | Cite<br>No.1 | Foreign Patent Document  | Publication Date MW-DD-YYYY | Name of Patentos or<br>Applicant of Cited<br>Document | Pages, Columns, Lines,<br>Where Relevant<br>Passages or Relevant<br>Figures Appear | 7° |
|                       |              | Country Code <sup>3</sup> - Number <sup>6</sup> - Kind Code <sup>3</sup> ( <i>If known</i> ) |                             |   |  |    |
|                       |              | ·  |                             |   |  |    |
|                       |              |  |                             |   |  |    |
|                       | l            |  |                             |   |  | /  |

| OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS   |  |  |  |  |
|---|--|--|--|--|
| Examinar Cite Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. |  |  |  |  |
|   |  |  |  |  |
|   |  |  |  |  |

| Examiner Signature | Chelcie L. Days | Date<br>Considered | 02/09/2006 |
|--------------------|-----------------|--------------------|------------|

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered, include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

<sup>1</sup> Unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

Approved for use through 10/31/2002. OMB 0651-0031 U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known

Application Number 10/646,472

Filing Date August 21, 2003

First Named Inventor Jamie Wakeam et al.

Group Art Unit 2661

Examiner Name TBA

Attorney Docket Number 003797.00618

(use as many sheets as necessary)

of

**U.S. PATENT DOCUMENTS Document Number** Name of Patentee or Applicant of Publication Date MM-DD-YYYY Pages, Colurrens, Lines, Where Relevant Passages or Relevant Figures Appear Cite No. Cited Document Examiner Number - Kind Code<sup>2</sup> (if known) 5,546,538 A1 08-13-1996 Cobbley et al. 5,455,901 A1 10-03-1995 Friend et al. 6,292,857 B1 09-18-2001 Sidoroff et al. 2001/0012401 A1 08-09-2001 Nagy 02-06-2003 2003/0028851 A1 Leung et al.

| FOREIGN PATENT DOCUMENTS |              |   |                             |   |  |                |
|--------------------------|--------------|---|-----------------------------|---|--|----------------|
| Examiner<br>Initials*    | Cite<br>No.1 | Foreign Patent Document   | Publication Date MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited<br>Document | Pages, Columns, Lines,<br>Where Relevant<br>Passages or Relevant<br>Figures Appear | T <sup>©</sup> |
|                          |              | Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>3</sup> (if known) |                             |   |  |                |
|                          |              |   | ·                           |   |  |                |
|                          |              |   |                             |   |  |                |
|                          |              |   |                             | <u> </u>  |  |                |

| OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS |  |   |  |  |  |
|---|--|---|--|--|--|
| Examiner Cite Initials No.1                       |  | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. |  |  |  |
|   |  |   |  |  |  |
|   |  |   |  |  |  |

| Examiner<br>Signature | Chelcie L. Dang | Date<br>Considered | 02/06/2006 |
|-----------------------|-----------------|--------------------|------------|
|-----------------------|-----------------|--------------------|------------|

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

OIPE

+

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.